**Department of**
**Environmental Protection**
**Bureau of Land & Water Quality December, 2003**

**O&M Newsletter**

**A monthly newsletter for wastewater discharge licensees, treatment facility operators and associated persons**

## *For Practice:*

1. A cross-connection is:
   a. A special type of tap.
   b. The connection of two approved water systems for fire protection purposes.
   c. The connection of two pipes using an approved backflow prevention device.
   d. Any connection which allows potable water to be contaminated.

2. A tank is 10 feet in diameter and 18 feet deep, How much water will it hold?
   a. 36,191 gallons
   b. 4,524 gallons
   c. 10,575 gallons
   d. 24,128 gallons

3. The hydrogen ion is most active (most corrosive) at a pH value below:
   a. 4
   b. 5
   c. 7
   d. 8

4. You observe a large number of dead fish floating in the receiving water downstream of your treatment plant. What is the most likely cause of that fish kill?
   a. Not enough chlorine in your effluent.
   b. High concentrations of heavy metals.
   c. Very low water temperature.
   d. Low dissolved oxygen levels in the receiving water.

## Approved Training

December 9, 2003 in Presque Isle, ME – Safety/Security Screening of wastewater for toxicity & Simplifying your Wastewater Process Monitoring - Sponsored by JETCC, (207) 253-8020 – Approved for 6 hours.
*****
December 11, 2003 in Augusta, ME – 10 Best Kept Water & Wastewater Management Secrets with Simplified Nutrient Monitoring in Small Wastewater Systems - Sponsored by JETCC, (207) 253-8020 – Approved for 6 hours.
*****
December 12, 2003 in Augusta, ME – Chlorination Disinfection Science: Comparing Gas, Liquid and Powder Chlorination Process plus 10 Best Kept Water & Wastewater Management Secrets - Sponsored by JETCC, (207) 253-8020 – Approved for 6 hours.
*****

## *Answers to For Practice:*

1. d. A cross-connection is any connection which allows the contamination of potable water by wastewater or other non-potable water.

2. c. Volume = radius * radius * ? * height * 7.48 gal/cu. ft.
   Volume = 5 ft * 5 ft * 3.14 * 18 ft * 7.48 gal/cu. ft = 10,575 gallons

3. a. pH is the measure of the ratio of hydrogen and hydroxide ions in a water solution. As the number of Hydrogen ions increases, the pH decreases. Thus, the lower the pH, the more corrosive the water becomes.

4. d The most common cause of large fish kills is lack of oxygen in the water. Heavy metals can accumulate in fish tissue and cause chronic health problems or mutations in later generations. Low chlorine levels in the effluent would have, if anything, a beneficial effect on fish in the receiving water. Fish, as cold-blooded animals, are not affected by low temperatures in the receiving waters.

## Certification News

The Fall Wastewater Treatment Plant Operator Exams were given on November 12, 2003. The results should be back before Christmas, but there are no guarantees. We'll let everyone know as soon as we have the results. The Spring exam will be given on May 12, 2004.

## DMR-QA Study 23 Update

Participants in the EPA DMR-QA Study 23 should have received their chemistry test results from their "unknown samples" provider labs by October 31, 2003. These evaluation reports were also sent to EPA and DEP. Any discrepancies (Check For Error, Not Acceptable) should be investigated and resolved by the permittees. This means that the laboratory technician has to try to figure out what caused the laboratory test result problem and fix any analytical issues so that any future data generated is accurate and reliable. A retest QA sample may be a good idea in order to prove that the previous problem has truly been resolved.

After the cause of the inaccurate data is identified, corrective action should be taken in the laboratory. For all parameters that were evaluated as "Not Acceptable", a cause and correction letter should have been sent to the DEP by December 8, 2003. Thank you to all who have sent these letters already. For those who have yet to follow-up on "Not Acceptable" evaluations from their providers, please describe the corrective actions to be taken in sufficient detail to explain why this will correct the problem. Your facility inspector needs to be confident that data being reported is reliable. Please send these letters to Ken Jones, DECTA, 17 State House Station, Augusta, ME 04333.

If you have questions about the DMR-QA program or testing problems, please call me at 287-4869. I may be able to make suggestions to help you find the cause of your lab problem.

***Ken Jones***